THE NEWSLETTER FOR SCIENCE COMMUNICATION IN INDIA & ABROAD

Capsule

APRIL
JUNE
1986

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LARGEST SCIENCE CENTRE OPEN FOR

YOUNGEST CITIZENS

NEHRU Science Centre, Bombay was inaugurated on November 11, 1985 by Shri Rajiv Gandhi, the Prime Minister with his enthusiastic comment that such Centres should come up all over India, as rapidly as possible.

Nehru Science Centre provides a unique opportunity to children as well as to adults to unravel the mysteries of science by manipulating things. Participation is the key-word in NSC, in contrast with most of the other touch-me-not museums. Visitors walk through a fascinating World of Perception involving their senses of tactility smell, hearing, vision and discover science by themselves. The forms with shapes and sizes, the charm of colours, the magic of mirrors, the beauty of Nature and the thrill of Discovery Hall engross the children and their parents. Here one can experience a weightless situation or observe the motion of satellites around the Earth without travelling into Space. Here one can explore thousands of inexplicables and find the right answers.

Computer and microprocessor-based exhibits, children's Play Corner in such exhibition hall, industrial demonstrations, Glass Woman and the outdoor Science Park are some of the unique features of the Centre. NSC runs two museobuses, the large mobile science exhibition units, in rural areas of Maharashtra, Gujarat, Rajasthan and Madhya Pradesh throughout the year. The Centre also runs a District Science Centre in the tribal belt of Dharampur in Gujarat.

Prime Minister Shri Rajiv Gandhi watching the participatory exhibit on Celestial Motion at Nehru Science Centre, Bombay.

NCSM SPEAKS

THE National Council of Science Museums is happy to present to you the CAPSULE. Not just a spokesman of the NCSM Family, CAPSULE is the proposed Meet for all like-minded organisations engaged in the field of science & technology communication, non-formal science education, community development and so on. We believe, a network of interactive communication, exchange of information and assistance among all organisations sharing the same cause with us, will accelerate the realisation of the Cause.

So, CAPSULE invites you all to join the Forum. Let us know and understand better about ourselves, our fields of activity, achievements and future programmes. CAPSULE will be happy to disseminate your experience to a wider audience. A brief report from you with all publications, journals, brochures, souvenirs, cards etc. and photographs will be of much help. Along with publicity through CAPSULE your information will go to our data-bank, subjectwise and institutionwise, for reference by anyone interested.

Please keep in touch with our Editor. We believe, our relations in future will develop to fullness.

SCIENCE PARKS

CAN you imagine a Children's Park without a see-saw ? It is such a commonplace fixture. It works perfectly when almost equal weight is put at both the ends. In a Science Park there is a see-saw too. But deliberately the fulcrum is placed slightly off the Centre. The effect ? Who can gauge the fun and confidence the children get when they find themselves capable of lifting their parents at the other end ?

A Science Park exhibit is more thought-provoking than action-oriented. It is demonstrative both to the child and its escorting parent or teacher. In fact, more interesting is to note the palpable change of identity in the elders—from passive escort to a thoughtful participant.

Hear Isis speak in whisper, which is audible even more than 200 ft. away. Two ancient looking statues, a great distance apart, connected by underground plumbing pipe create the effect of whispering gallery, demonstrating the technique—how in olden days the illusion of God's voice used to be created by the priests, to fool the naive and credulous populace.

Every exhibit has something for those who seek more than mere fun. Roll a ball through three successive loops or along three different channels to demonstrate the effect of centrifugal force or that it travels fastest on a cycloidal path.

Excitement is everywhere. Interspersed among trees, shrubs, flower-beds, ponds and garden pathways, are large artefacts like a windmill, a railway engine, an early horse-drawn electric tram-car, a hydroelectric turbine, a supersonic jet fighter and other air-crafts—all waiting to be discovered and explored by the children. A green house, full of cactii, succulents and bonsai, an aviary full of local as well as rare birds, a pet-area where live animals are kept for children's handling and the children themselves, add life to the picturesque surrounding.

Taking science to the open from indoor galleries, at low cost and saving time; infusing it into a child's physical game—Children's Science Park is the demand of the time. Every major unit of NCSM has a Science Park as its integral part. Over the years, NCSM has developed a fine expertise in creating Science Parks, and is consolidating the concept of Science Park into an organised movement.

Science Park, District Science Centre, Gulbarga.

Science Park, Nehru Science Centre, Bombay.

(Un) scientific see-saw at Science Park, Shrikrishna Science Centre, Patna.

An interesting exhibit at Science Park, District Science Centre, Dharampur.

SCIENCE MUSEUMS IN INDIA

WHEN some value is added, an organisation becomes an institution. Value emanates from its ideal and from realisation of the ideal through service to the community. Science Museums are such institutions. The concept of science museums, over the years, leapt from quantitative to a qualitative change. From a storehouse of dead artefacts to be the Forces of Future, disseminating the spirit of Science & Technology to all strata of the nation—that is the change. Numerical growth is, nevertheless, a corroborative pointer. To look beyond the physical graph is to find the inner growth.

Birla Industrial & Technological
Museum 19A, Gurusaday Road
Calcutta-700 019

Nehru Science Centre
Dr. E. Moses Road
Worli, Bombay-400 018

Visvesvaraya Industrial &
Technological Museum
Kasturba Road
Bangalore-560 001

Science Centre, Delhi
Khyberpass Institutional Area
Delhi-110 054

Shrikrishna Science Centre
West Gandhi Maidan
Patna-800 001

District Science Centre
North Lake Road
Purulia-723 101

District Science Centre
Municipal Garden
Gulbarga-585 103

District Science Centre
Garden Road, Dharampur-396 050

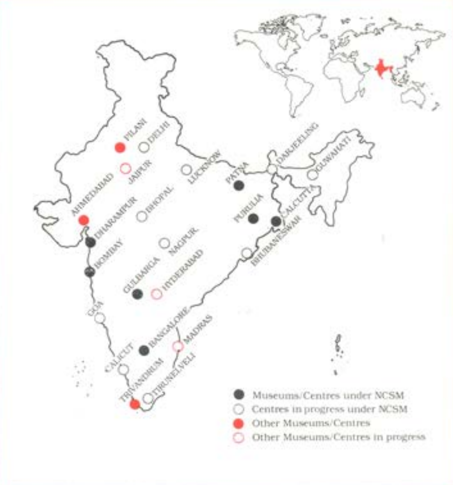
District Science Centre
Kokkirakulam, Tirunelveli-627 009

Regional Science Centre
Sachivalaya Marg
Bhubaneswar-751 013

Regional Science Centre
Jawaharnagar, Khanapara
Guwahati-781 022

Regional Science Centre
Aliganj Extension Sector E,
Green Belt, Lucknow-226 020

Kerala State Science & Technological Museum
Old Engineering College Campus
Trivandrum-695 033



Birla Museum, Pilani.

Nehru Science Centre, Bombay.

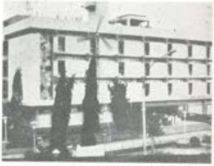
Birla Museum, Pilani-333 031

Vikram A. Sarabhai Community
Science Centre, Navarangpura
Ahmedabad-380 009

Tamil Nadu Science & Technological Centre,
Engineering College Post
Madras-600 025

B.M. Birla Science Centre
Statue Circle, Jaipur.

Andhra Pradesh Science Centre
Jawahar Bal Bhavan
Hyderabad 500 004


Visvesvaraya Industrial & Technological Museum, Bangalore.

SEMINAR WORKSHOP

1985-86

Dhokra Workshop
Birla Industrial & Technological Museum
April 10—May 08, 1985

Workshop on "Science Through Radio"
Vikram A. Sarabhai Community Science Centre
May 29—30, 1985

Workshop on Environmental Awareness & Protection
Birla Industrial & Technological Museum
June 04, 1985

Workshop on Video Scripting for Science Programmes
Vikram A. Sarabhai Community Science Centre
July 30—31, 1985

A Training Course in Science & Technology Communication
National Council for Science & Technology Communication
Delhi, July 16—August 05, 1985

National Seminar for school students, at district & state level all over India, on "We and the Ocean"
National Council of Science Museums
August—September, 1985

All India Workshop on
The Role of State Council in Popularisation of Science
Deptt. of Science & Technology, Govt. of India, Panchmarhi (M.P.), October 17—18, 1985

International Conference on Population Mapping
National Atlas & Thematic Mapping Organisation
December 12—14, 1985

1986-87

New Approach to Planetarium Education

Organised by NCSM under Indo-US Sub-commission on Education & Culture.

Calcutta and Bombay, December, 1986.

Creative Endeavour with Exhibits and Programmes

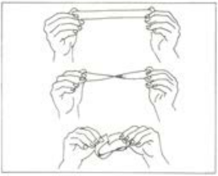
Organised by NCSM, Under Indo-US Sub-commission on Education and Culture

India, December, 1986.

NEW EXHIBIT

Möbius Band

Cut a strip of paper and hold it with your thumbs and forefingers at both the ends. Turn over one end and put two ends together. You form a Möbius Band. Now, if you start moving from one point, you will come back to the same, traversing both the surfaces. Science Museums around the world display small Möbius Band as a part of their indoor exhibits. For the first time, a giant Möbius Band has been developed in the outdoor Science Park in Gulbarga where children can climb and move along the surfaces of the Möbius Band. It is a great fun.



Lazy Tube

NSC has installed a 16 ft. long and 4 inches diameter aluminium rod having an all-through hole at the centre. You drop objects from the top which almost instantaneously hit a gong at the bottom. Things fall downward by gravity—says the Physicist. Now drop a piece of magnet from the top and climb down the stairs to the bottom. You still have enough time to catch the magnet, as it takes an incredible 45 seconds to reach the bottom !

NEW KIT

Weightlessness

Astronauts experience the phenomenon of weightlessness while moving in Space. Objects lose weight when they fall freely—says the Physicist. NSC at Bombay has developed an outdoor park exhibit to demonstrate weightlessness in free fall. Raise an object to about 20 ft. of height by a simple pulley. You can notice its weight on spring balance. Now suddenly release the string and observe the spring balance which falls freely alongwith the object. The balance reads zero !

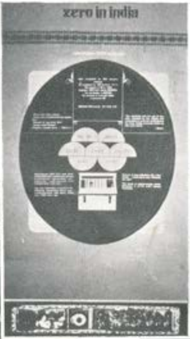
"INDIA—A Festival of Science" organised by NCSM is now on show in the U.S.A. The exhibition was first held in the Museum of Science and Industry in Chicago from June 05 to September 02, 1985. It was then held in the California Museum of Science and Industry at Los Angeles from October 15, 1985 to January 15, 1986. The exhibition is now in Oregon Museum of Science & Industry in Portland from March 01 to May 31, 1986.

Set up in about 15000 sq. ft. area with 50 precision working models and participatory exhibits, over 400 visual panels and 12 live demonstration corners, the exhibition highlights on the continuum of the scientific and technological tradition of the country over 5000 years.

Animated and participatory exhibits communicate to the West the remarkable achievements of India in mathematics, astronomy, medicine, surgery, chemistry and physics in ancient days. Astronomical observatories of Jai Singh, working model of Ooty radio telescope, ancient zinc furnace, replica of rust proof iron pillar, mediaeval arms and armours, traditional distillation process for making perfumes are some among the most popular and fascinating exhibits.

Live demonstration corners recreate the past, displaying a centuries—old expertise in silver filigree, meenakari, bidri, brocade, wood carving, miniature painting, micro calligraphy and exquisite marble inlays. Visual panels with video and microprocessor-based exhibits present the marked progress made in areas of agriculture, energy, nuclear science, electronics and space in recent days.

India a Festival of Science



EVENTS .... INDIA

Birla Museum, Pilani

An integral part of the Birla Institute of Technology and Science, Pilani, Rajasthan, the Birla Museum is the first science museum in the country.

Set up in Pilani's celebrated educational campus, the museum was founded in 1954. The exhibits are mainly on motive power, metals and minerals, transport, space, mining, chemistry, manufacture of textiles, food and agriculture, arms and armours etc. The gallery on Space deserves special mention. The museum is known for excellent working models and outstanding display techniques.

Vikram A. Sarabhai Community Science Centre

The Vikram A. Sarabhai Community Science Centre at Ahmedabad works for popularisation of science and technology amongst school children as well as the community. Their exhibits focus primarily on participation by visitors, and on fundamental science like physics, chemistry, mathematics and bio science. VSCSC accommodates a large number of hands-on exhibits, both indoor and outdoor. The Centre conducts various training programmes for different strata of the community—students, teachers and housewives. The Centre has specialization in development of kits.

Learning Through Fun at Community Science Centre, Ahmedabad.

Comet Halley

Comet Halley reappears after 76 years. Amateurs and professionals of the world are geared up for utilizing the rare chance of viewing it, studying it.

Indian Space Research Organisation (ISRO) is bringing out special publications on the Comet, for amateurs as well as for professionals.

To encourage systematic observation of the Comet by young amateurs, NCSM has launched an exhibition consisting of 35 visual panels, simultaneously at ten Centres in India. Other activities include sky observation and telescope-making programmes, quiz contest, popular lectures and film shows on astronomy.

KSSP has taken a massive programme for popularising astronomy on the advent of Halley's Comet.

Enthusing Comet Enthusists at Birla Industrial & Technological Museum, Calcutta.

Kerala State Science & Technological Museum, Trivandrum

First phase of the Museum has opened in the Old Engineering College Building. Exhibits are mainly based on physics, electronics, architecture and industries. The Museum has plans for massive expansion with new exhibits, science park and planetarium.

District Science Centre, Purulia

The District Science Centre at Purulia has undertaken a novel experimental rural development programme amongst tribal community which lives much below the poverty line. Being hunters and food-gatherers, these tribes did not know proper agricultural practices. The District Science Centre is motivating the community to introduce simple science and technology in agricultural production to improve their quality of life.

A low-cost well by District Science Centre, Purulia.

Kerala Sastra Sahitya Parishat

Kerala Sastra Sahitya Parishat and people's science movement have become synonymous. Their field of endeavour includes publication of popular science literature for different age groups, development of science clubs and science corners and promotion of science quiz competition across the State. This voluntary organization has a non-formal adult education wing. Parishat's "Science March" has become a movement in Kerala where engineers, doctors and teachers participate in march from village to village and involve thousands of villagers in discussion on application of science in day to day life. KSSP tries to fight superstition and obscurantism prevalent in the minds of the people. KSSP has a small science centre at Calicut, with exposition based on life-sciences.

ICOM '86

The general theme for the 14th General Conference of the International Council of Museums (ICOM), which is scheduled to be held at Buenos Aires, Argentina from October 26 to November 04, 1986 is "Museums and the Future of our Heritage—Emergency Call". Mr. S. K. Bagchi, Director, BITM is invited as a representative from Asia, to deliver keynote speech on "The Contribution of Science & Technology to the Preservation of Cultural Heritage". Discussions will centre upon the choice of modes of action and strategies which would ensure safeguarding of the cultural and natural heritage of every community in all regions of the world. The Indian National Committee of ICOM is planning to play a big role in this conference.

ICOM International Committee on Science & Technology Museums (CIMUSET)

The annual meeting of the CIMUSET was held at the Museum of Science, Barcelona, Spain during November 25-29, 1985. The theme of the meeting was "Technology—Necessity and Danger—the Pros and Cons in Museums". The meeting was attended by many CIMUSET members from all over the world.

Museum of Science and Industry, Chicago

A new 5300 sq. ft. permanent exhibition on Architecture was opened in March, 1986. The exhibition comprises of sections devoted to architecturally defined spaces, wood-frame and steel construction, the history of Chicago architecture, and the professions which make architecture. At the entrance is a grid, disappearing at far horizon. Famous Chicago examples of major building types line the hall. Apart from photos, models, texts and artefacts adorning the exhibition, for visitors there is a variety of computer activities. Interesting is the facility to design a house or a highrise, utilising the computer aided design programme.

Strolling in Space—Travelling exhibition of ASTC.

Association of Science & Technology Centres : (ASTC)

ASTC, (1413 K. Street, Washington DC 20005) an apex body of Science Centres in USA, runs a huge Travelling Exhibition Service to which had recently been added nine new exhibitions —(1) Aeronautics and Space—the NASA Story, (2) The Atom—Peril & Promise, (3) Communications on the Move, (4) The Duck Stamp Program, (5) Lichens—Fine Details of the Natural Landscape, (6) Omingmak—The Muskox, (7) Sightseeing—A Space Panorama, (8) Small Science and (9) Vision—The Precious Treasure. These exhibitions are presently travelling all over the States. NCSM is exploring the possibilities of receiving those exhibitions in India, under exchange of exhibition programme of the Indo-US Sub-commission.

Yokohama Science Centre

A 25 million dollar Science Centre opened in Japan on May 05, 1984 after two years of construction. Its emphasis is on science education for children. Some of the interesting exhibits are—a model of Yokohama's transportation system, direct communication with a weather satellite, a scanning microscope and other optical devices, a physical exercise room, an exhibit on the nature of light and a computer and video complex etc.

Omnimax in Singapore

The Singapore Science Centre is planning to add a multi-million-dollar, Omnimax Theater to its facilities, making it the first museum in South East Asia to have domed 70 mm Theater. The Theater will also be used for Planetarium shows and is expected to open in 1987.

Make a magnetic track at Exploratorium, New York.

Exploratorium Comes to New York

To enthuse New Yorkers appreciate colour, light & vision in a different way, the IBM Gallery of Science & Art in Manhattan has commissioned The Exploratorium to create a major participatory exhibition on "Seeing the Light".

The exhibition, which remains open from January 28 to April 26, presents 82 of the Exploratorium's 600 exhibits, including "Chesire Cat", "Pipes of Pan", "Antigravity Mirror", and "Everyone is You & Me".

The exhibit goes from here to New York Hall of Science at the Flushing Meadow, which is scheduled to open in July, 1986.

The IBM Gallery of Science & Art is a 13,000 sq. ft. exhibition facility. The Exploratorium exhibit is the second major science exhibition to be mounted at the IBM Gallery in conjunction with a science museum. "Exploring Microspace", developed by the Smithsonian Institution, opened there earlier this year, was the first venture.

(Continued to page 8)

IN LIGHTER VEIN...

(Continued from page 7)

Smithsonian Workshop

The Smithsonian Institution, Washington is organising a series of Museum Professional Development Workshops in 1985-86. Subjects covered between October, 1985 and May, 1986 include, public relations, security, audio-visuals, design and production of exhibitions, computers in management and research etc.

Workshop on Computers

The Indian National Committee for the International Council of Museums in collaboration with NCSM organised a hands-on Workshop on "advanced methods of documentation of museum objects by using computers". A preliminary Workshop was held at Calcutta on December, 19-20, 1985, while the main Workshop was held at New Delhi on December 22-24, 1985. About 30 professionals participated. Dr. John Sutton, Associate Dean of Instructional Services., St. Norbert College, Wisconsin, U.S.A. participated in the Workshop under the Indo-US Sub-commission Programme on Education & Culture.

Workshop on the Planet Earth

A Workshop on development of new concepts for organising a thematic exhibition on "The Planet Earth" was held during January 01-18, 1986 in U.S.A., with participants from science museums of India and USA. Topics involved were Cosmology, Planetary System, Evolution of Earth and Life, Energy Resources and Environment. The Workshop has drawn up a detailed list of exhibits, mostly participatory and interactive, that can be developed both in India and USA, within a couple of years.

India and Thailand

For the last few years, several officers from the Centres for Educational Museum, Bangkok have visited the museums and centres under NCSM to undergo training in Museological practices like design of interactive exhibits, exhibition design, educational programmes etc. During 1985-86, Mr. Supong Makapol, Curator, and Mrs Suphan Srinoun, Designer, visited the museums at Calcutta, Purulia, Bangalore, Bombay and Delhi for two months.

GENTLEMEN! AS WE ALL KNOW GENETIC ENGINEERING IS REVOLUTIONISING THE WORLD WE'RE A STEP AHEAD OF NIETZSCHE IN CREATING SUPERMAN---
LOOK! HERE IS THE EGG I DEVELOPED IN LAB ONE IS IN THE INCUBATOR ...AND IN SECONDS YOU'LL SEE THE RESULT...
WORKSHOP ON GENETIC ENGINEERING

LAST TIME HE CAUGHT ME IN A PAINTING NOW HE IS FIDDLING WITH CAMERA!

De La Villette, "Giotto" and Halley's Comet

De La Villette, the largest science museum in France is going to open its Centre of Science and Industry, coinciding it with a scientific and technical event of worldwide importance—the meeting between Giotto, the space probe sent by European Space Agency and Halley's Comet, expectedly on the night of March 13-14. An apt commemoration.

THE NEXT...

THE next District Science Centre under the NCSM opens in Tirunelveli in Tamil Nadu shortly. Await details in the next issue of CAPSULE.

WE NEED....

EDITOR CAPSULE is looking forward to your sending by April 30, 1986 publication materials for the second issue of CAPSULE. Please send short notes, photographs, problems, suggestions, cartoons and puzzles.

Published by :—
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